International Journal of Agricultural
Science and Research (IJASR)
ISSN (P): 2250-0057; ISSN (E): 2321-0087
Vol. 9, Issue 3 Jun 2019, 31-36

TRANS STELLAR
•Journal Publications •Research Consultancy

RELATIONSHIP OF SOCIO-PSYCHOLOGICAL CHARACTERISTICS OF RURAL YOUTH WITH KNOWLEDGE GAIN THROUGH INFORMATION AND COMMUNICATION TECHNOLOGY TOOLS

M. R. NAVEEN KUMAR[1] & H. PHILIP[2]

[1]*Research Scholar, Department of Agricultural Extension and Rural Sociology, Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India*

[2]*Professor, Department of Agricultural Extension and Rural Sociology, Tamil Nadu Agricultural University, Coimbatore, Tamil Nadu, India*

ABSTRACT

There is an urgent need for increasing the productivity, profitability and sustainability of major farming systems in the country through synergy between technology and public policy. This study was taken up to find out the relationship of selected variables towards the knowledge gain of the rural youths. The study was conducted in Kanyakumari district of Tamil Nadu during 2018. The district was selected purposively whereas; the respondents were selected through random sampling procedures. Simple correlation coefficient, multiple linear regression and backward regression analysis were worked out in the study. The study identifies that the independent variables namely, achievement motivation, awareness on ICT tools and services, degree of ICT accessibility and preferred location of ICT access. The backward regression approach particularly points out the achievement motivation, preferred location of ICT access, degree of ICT accessibility, risk taking ability and information seeking behavior as the major contributing variables towards the knowledge gain of the rural youths.

KEYWORDS: Relationship, Knowledge Gain, Backward Regression Approach & Contributing Variables

Received: Mar 11, 2019; **Accepted**: Mar 31, 2019; **Published**: Apr 19, 2019; **Paper Id**.: IJASRJUN20194

Original Article

INTRODUCTION

The all India report on input survey points out the average age of all categories i.e. marginal, small, medium and large farmers was above 50. The overall literacy rate in the rural India increases year after year and in parallel, the average age of the farmers increases as well. The above fact clearly elucidates that the literate rural youths are no more interested in carrying over the farm operations. There might be several reasons for it namely, marginalization of farm lands that hinders the farm mechanization, lack of innovative farm skills, aberrant monsoon, low productivity, lack of basic understanding on farming, insufficient education on markets, hypocrisy of middlemen etc. There is an urgent need for increasing the productivity, profitability and sustainability of major farming systems in the country through synergy between technology and public policy. Inculcating the Information and Communication Technologies (ICT) in the farmers' life not only reduces the hardship of limited available extension functions of the locality but also increases the confidence level of the farmers hence, the development becomes sustainable. The 'alien' view among them, on new emerging technologies might change by getting accustomed to ICT tools. Almost all the rural youths are aware of the ICT tools and possess one or more ICT tools namely, smart phones, Laptops (through the government of Tamil Nadu's 'Free Laptop provision scheme') etc.,

The ICT has three major roles to play- inform, instruct and influence. The instructive role of ICT is mainly used in administration whereas informative and influential roles of ICT were mainly exploited in development programs. The audience or receivers, in particular, the farmers, who are the ultimate users of the messages received from different sources through different ICT tools, perceive several roles of ICT which can satisfy their information needs and influence their behavior to a desirable way (Chandra et al, 2018).

This study was taken up with the objective to find out the relationship of selected variables towards the knowledge gain of the respondents i.e. the rural youth.

METHODOLOGY

The study was conducted in Kanyakumari district of Tamil Nadu during 2018. The district was selected purposively whereas, the respondents were selected through random sampling procedures. Kanyakumari district was purposively selected for peculiar reasons such as, district's major livelihood is plantation (Banana, Coconut and Rubber) and that its' decennial rural population growth rate is continuously in decreasing trend, -5.51 % in 2001 and -43.21 % in 2011 census (Statistical Handbook, 2017). This controversial data is worth examining and with this view the district has been taken up for this study. The rural youths enlisted under Krishi Vigyan Kendra's ARYA (Attracting and Retaining Youth in Agriculture) scheme has been given priority. Among the 200 enlisted rural youths 40 rural youths who cultivate banana have been selected randomly for the study. The value addition technologies in banana have been taught to the respondents through the ICT tools namely, Multimedia slides (Power point slides coupled with Graphical Interface files, Text colour, Animation tools) and Videos. The knowledge gain has been catagorised as a dependent variable for the study and about 19 variables have been identified as independent variables for the study. The variables were conceptualized and operationalized according to the need of the study and measured with the help of pre-constructed tools. The data was collected with the help of a well - structured questionnaire. The collected data was tabulated and analyzed by using statistical tools like cumulative frequency, percentage analysis, Simple correlation coefficient, multiple linear regression and backward regression analysis.

FINDINGS AND DISCUSSION

The knowledge gain refers to the mean knowledge gain obtained after exposing the respondents to the ICT tools by before and after method. The association and contribution of the selected independent variables towards the knowledge gain of the respondents have been presented in Table 1and Table 2.

Table 1: Association of Rural Youths' Knowledge Gain of ICT Tools (Multimedia Slide + Video) Users (N = 40)

Variable No.	Variables	'r' Value
X_1	Age	-0.034*
X_2	Gender	-0.009
X_3	Educational status	-0.093*
X_4	Occupational status	0.037
X_5	Farm size	0.031
X_6	Extension Agency contact	0.120
X_7	Mass Media Exposure	-0.035
X_8	Information seeking behaviour	-0.088
X_9	Achievement motivation	0.498**
X_{10}	Innovativeness	0.314*
X_{11}	Training undergone	0.278

Table 1: Contd.,		
X_{12}	Aspiration of rural youth	-0.007
X_{13}	Risk taking ability	0.081
X_{14}	Decision making ability	-0.032
X_{15}	Awareness on ICT tools and services	-0.037
X_{16}	Possession of modern electronic gadget	-0.064
X_{17}	Degree of ICT accessibility	-0.339*
X_{18}	Preferred location of ICT access	-0.209
X_{19}	Willingness to pay for ICT services	0.103*

** - Significant at one per cent level
** - Significant at five per cent level

Nineteen independent variables such as, Age, Gender, Educational status, Occupational status, Farm size, Extension agency contact, Mass media exposure, Information seeking behavior, Achievement Motivation, Innovativeness, Training undergone, Aspiration of rural youth, Risk taking ability, Decision making ability, Awareness on ICT tools and services, Possession of modern electronic gadget, Degree of ICT accessibility, Degree of ICT accessibility and Willingness to pay for ICT services have been taken up for the study. Correlation analysis shows the association of the independent variables towards the knowledge gain of the respondents.

It was observed from the Table 1 that independent variables such as, Achievement motivation, Innovativeness and Willingness to pay for ICT services are positively associated with the knowledge gain. In which, Achievement motivation shows 0.01 % significance whereas, remaining two associated show 0.05 % respectively. It could be inferred that, if the individual possess the above mentioned attributes his / her knowledge gain will be more. The independent variables namely, Age, Educational status and Degree of ICT accessibility are negatively associated with 0.05 % significance towards the knowledge gain. It could be understood that, if the individual possesses the above-mentioned attributes his / her knowledge gain will be less.

The explanations of the Table 1 could be, the rural youths who are motivated towards achieving something in their life are eager in acquiring knowledge through various available sources. Likewise, the rural youths with higher innovativeness i.e. willing to try out new things in their agricultural farms and in day to day life are easily accepting the new knowledge provided to them and the variable willingness to pay for ICT services implies how much interest and degree of seriousness the respondents show towards learning things via ICT tools.

Table 1 also lime lights some important findings such as, if Educational status of the respondents increases their knowledge gain decreases it might be substantiated as, the individuals' interest towards learning the subject is more important irrespective of his / her academic qualifications. Even though, basic educational qualification is required to understand and perform the ICT tools. It solely may not be the reason for their knowledge gain. Obviously, as several studies implies, if Age increases the individual's learning interest towards new techniques and technologies gets reduced. This finding is contradictory to the findings of Senthil, 2013 who has conducted research on Tribal Potato farmers.

Degree of ICT accessibility can be estimated as the average time spent by each individual on ICT tools daily, as it is negatively associated to the knowledge gain and it implies that, the more time spent on ICT tools the lesser the interest on learning through it.

Table 2: Contribution of Rural Youths' Knowledge Gain of ICT Tools (Multimedia Slide + Video) Users (N = 40)

Variable No.	Variables	Regression Co-Efficient	't' Value	P Value
X_1	Age	0.058	0.708	0.487
X_2	Gender	-0.151	-0.153	0.880
X_3	Educational status	0.022	0.070	0.945
X_4	Occupational status	0.033	0.044	0.965
X_5	Farm size	0.020	0.030	0.976
X_6	Extension Agency contact	0.236	0.941	0.358
X_7	Mass Media Exposure	-0.026	-0.205	0.840
X_8	Information seeking behaviour	-0.114	-1.345	0.194
X_9	Achievement motivation	0.519	3.867	0.001
X_{10}	Innovativeness	-0.134	-0.270	0.790
X_{11}	Trainings undergone	0.444	0.847	0.407
X_{12}	Aspiration of rural youth	-0.064	-0.266	0.793
X_{13}	Risk taking ability	0.186	0.872	0.394
X_{14}	Decision making ability	-0.048	-0.169	0.868
X_{15}	Awareness on ICT tools and services	-0.040	-0.234	0.017
X_{16}	Possession of modern electronic gadget	0.674	1.481	0.154
X_{17}	Degree of ICT accessibility	-0.504	-2.093	0.049
X_{18}	Preferred location of ICT access	-0.822	-2.870	0.009
X_{19}	Willingness to pay for ICT services	0.640	0.676	0.507

$R^2 = 0.621$ F = 2.144

It was observed from Table 2 that the nineteen independent variables signifying Knowledge gain based on multiple regression analysis bring about the R^2 (Co-efficient of multiple determination) value of 0.621. Hence, it could be inferred that the selected independent variables put together contribute 62.10 % of the total variation in the Knowledge gain of the respondents. The independent variable Achievement motivation (X_9) has contributed positively and significantly at 0.01 level of probability. Whereas, independent variables namely, Awareness on ICT tools and services (X_{15}), Degree of ICT accessibility (X_{17}) and Preferred location of ICT access (X_{18}) has contributed negatively and significantly at 0.05 level of probability towards the knowledge gain.

The survey results demonstrate that, three-fourth of the respondents fall under medium to high level category of achievement motivation i.e. majority of the rural youths would love to be a model person in their villages, they are eager towards learning and trying out new things on their own, these might be the reasons for the positive contribution towards their knowledge gain. These findings are in line with the findings of *Senthil, 2013.*

Awareness on ICT tools and services (X_{15}), Degree of ICT accessibility (X_{17}) and preferred location of ICT access (X_{18}) had contributed negatively towards the knowledge gain. It was observed that, majority of the respondents were aware of several ICT tools and services but they expressed that, 'they have not seen ICT tools in the educational aspect so far'. Even though, they utilize ICT tools for several purposes such as, communication and entertainment purposes the browsing habit towards their farming profession is almost nil. This finding is contradictory towards the findings of *Jayanthi, 2016* who had conducted experiment among the m-kisan users.

Likewise, about two-third of the respondents said that their daily usage on ICT tools is quite higher but its' negative contribution might be due to the reason that, 'mere usage of ICT tools doesn't necessarily mean that is either used constructively or for their professional development'. Respondents also believe that if location of ICT access was selected based on the sole opinion of the villagers. It might favour the dominant members of the locality therefore a prompt place

should be selected by government officials with the minimal consideration of villagers' opinion.

Further strengthening of the study required some powerful statistical tools hence, serious effort has been taken to cull out the major contributing variables towards the knowledge gain through the backward regression approach. 'In medical sciences, the backward regression analysis tool was used to identify the risky antibodies among various antibodies' (Knuppel *et al*, 2012). Table 3 denotes the major contributing variables towards the knowledge gain.

Table 3: Maximum Contributing Independent Variables on Knowledge Gain Using Backward Regression Approach

S. No.	Independent Variables	't' Value	Significant Values	R^2 Contribution	Ranking Order
1	Achievement motivation	-4.880	.000	0.548	1
2	Preferred location of ICT access	-3.160	.003		2
3	Degree of ICT accessibility	-3.100	.004		3
4	Risk taking ability	2.460	.019		4
5	Information seeking behaviour	-1.959	.058		5

With the help of backward regression approach, Achievement motivation (X_9), preferred location of ICT access (X_{18}), Degree of ICT accessibility (X_{17}), Risk taking ability (X_{13}) and Information seeking behavior (X_8) are identified as the major contributing variables towards the knowledge gain of the respondents which is evident from Table 3, showing that the above mentioned five independent variables alone influence the R^2 values with their contribution of about 54.80 %. Hence, all other independent variables contribute only to the extent of about 7.30 %. The rank order was given to the further distinct filtered variables' contribution i.e. Achievement motivation with the significance value of 0.000 followed by Preferred location of ICT access with significance value of 0.003, Degree of ICT accessibility with the significance value of 0.004, Risk taking ability with significance value of 0.019 and Information seeking behavior with significance value of 0.058 holds the rank order of 1,2,3,4 and 5 respectively. *Jayanthi, 2016* also quoted in her knowledge gain study that Information seeking behavior is one of the major contributing variables.

CONCLUSIONS

The study shows that independent variables such as Achievement motivation, Awareness on ICT tools and services, Innovativeness, Willingness to pay for ICT services, Age, Educational status and Degree of ICT accessibility, Preferred location of ICT access are all associated towards the knowledge gain of the rural youths. Likewise, the independent variables namely Risk taking ability and Information seeking behavior are also identified as the major contributing variables towards the knowledge gain of the respondents. It is concluded that any relevant research studies on knowledge gain of the rural youths in near future shall provide good results by inculcating these identified maximum contributing variables.

ACKNOWLEDGMENT

Researcher (M. R. Naveen Kumar) thank ICSSR (Indian Council of Social Science Research) for the funding support.

REFERENCES

1. *Chandra, N., M.L. Roy A. Mukherjee, R. Jethi, P. Joshi and H. L. Kharbikar. (2018). Information and Communication Technology for Dissemination of Agricultural Information in Hills: A Critical Overview. Indian Journal of Extension Education.54 (3): 19-25.*
2. *Jayanthi, M. (2016). Impact of ICT enabled Agricultural Extension Services among Farmers in Tamil Nadu. Unpub. Ph.D. Thesis, Tamil Nadu Agricultural University, Coimbatore.*
3. *A L Mamun, Abdullah., Haque, A., Alam, S., & Sultana, R. Minimization of Health and Environmental Hazards of Tobacco among the Folk Community in Rural Bangladesh.*
4. *Knuppelsven, Jorge Esparza and Ingo Marenholz.(2012). Multi-locus stepwise regression: a haplotype based algorithm for finding genetic associations applied to atopic dermatitis. BMC Medical Genetics. 13(8): 1471-1479.*
5. *Senthil, A. (2013). Effectiveness of Advanced Communication Contrivances in Transfer of Technology among Tribal Farmers – An Experimental Study. Unpub. Ph.D. Thesis. Tamil Nadu Agricultural University, Coimbatore.*
6. *Statistical Handbook. (2017). Government of Tamil Nadu. Retrieved from www.tngov.in on 11.09.2018*